What does the ‘R2’ mean in Windows Server 2008 R2?

Thu, Nov 3 2011, microsoft, 5

In this article we will untangle the confusing nomenclature behind Microsoft’s R2 product releases.

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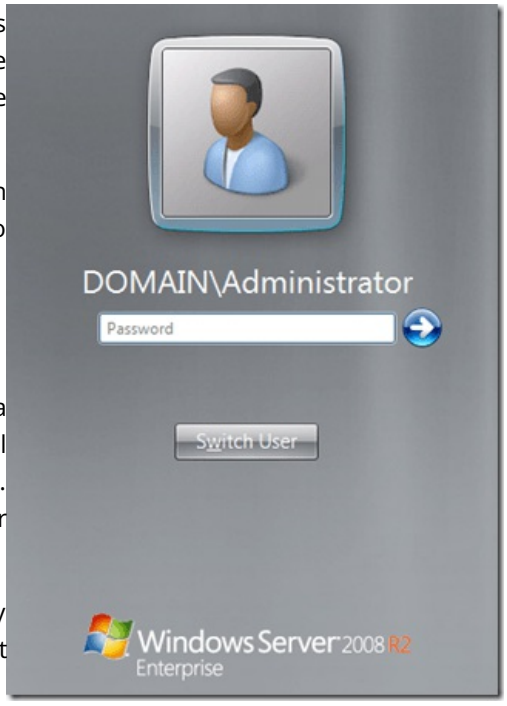

The question arises: What does the ‘R2’ mean in Microsoft products such as Windows Server 2008 R2 and SQL Server 2008 R2? While we are on the subject, what are the chief differentiators between a hotfix and a service pack?

In my opinion, Microsoft has historically been a wee bit less than clear on these points. To that end, I hereby make it my mission in this blog post to untangle the thorns and get us all to the same plane of understanding.

Hotfix vs. Service Pack ^

A **hotfix** (also called a **patch**) is a code module that is developed to address a single flaw in a software product. It bears mentioning that, in general, all Windows systems administrators are not asked to apply a Microsoft hotfix. Rather, hotfixes are generally intended for systems in which a particular problem rears its ugly head.

That said, Microsoft does release hotfixes every month (the second Tuesday to be more specific; this is affectionately referred to as “Patch Tuesday”) that apply to all operational Windows systems in the wild.

Whereas Microsoft creates hotfixes immediately to address 0-day exploits and releases them monthly during their normal patch cycle, service packs represent more significant updates to a Microsoft product.

Specifically, a service pack consists of the following three properties:

- Security fixes

- Bug fixes
- Performance enhancements
- (sometimes) new features

Because service packs encompass a much larger scale than a hotfix or hotfix rollup package, the application of service packs tends to require much careful Q/A testing by systems administrators before they are installed on production systems.

We can informally define a service pack as a rollup of all previous hotfixes since the previous service pack, along with some extra code to buff up performance and perhaps add some new features.

The Service Release ^

We might create a preliminary definition of the service release as a rollup of all previous service pack code, along with, again, performance boosters, bug fixes, and new features/add-ons.

Some administrators believe that a change to the operating system kernel code denotes the service release distinction. This isn't true in any consistent manner, at least as far as Microsoft is concerned.

Take, for example, Windows Server 2003. The R2 update here made no kernel-level changes to the OS, but instead focused on code fixes and new utilities.

By contrast, Windows Server 2008 R2 most certainly contains kernel-level changes, the most significant of which deals with the operating system's 64-bit-only nature.

Yet other administrators speculate that Microsoft calls service releases R2 as a psychological factor for systems admins. In other words, the party line is "I'm afraid to apply a service pack because I'm concerned the code will break my systems. However, a service release is somehow different and more stable than a service pack."

Ah...okay. As John Lennon said, "Whatever gets you through the night, it's all right."

So What's The Deal?

To get to the kernel (pun intended) of the issue, R2 in Windows Server 2008 means "Release 2," and the primary reason why Microsoft uses the R2 nomenclature as opposed to revising the major product version is as follows:

R2 releases do not require administrators to purchase upgrade client access licenses (CALs).

There you have it—in a nutshell. As you know, Microsoft product licensing can get expensive very quickly. We have to pay for the server license, and we have to pay for CALs to legally provide our users access to the server.

Question: Does an upgrade from Windows Server 2008 Release to Manufacturing (RTM) to Windows Server 2008 R2 require a new license and activation key?

Answer: Yes, it does.

Conclusion

I hope now that you feel much for comfortable with the release nomenclature that Microsoft adopts for some of its enterprise products. Please feel free to leave your questions and opinions in the comments portion of this post. Thanks for reading and take care.

For Further Study:

- Windows Server 2008 R2 Licensing
- Service Packs, Hotfixes and Cumulative Upgrades
- Windows Server Licensing for Dummies
- Client Access Licenses

5 COMMENTS

Andreas Erson

5 years ago

I feel that an important piece of information is missing from this article regarding the support lifecycle of R2-releases.

The end dates of mainstream- and extended support for R2 releases are the same as for the original product.

Microsofts exact wording:

“The Support Lifecycle for R2 releases are identical to the original product version’s Support Lifecycle and do not change either the Mainstream Support nor Extended Support timeframes for that product.”

See the entire 29th paragraph in the Microsoft Support Lifecycle FAQ:

http://support.microsoft.com/gp/lifepolicy

Examples:

Windows 2008 & Windows 2008 R2

Mainstream support end date: 7/9/2013

Extended support end date: 7/10/2018

SQL Server 2008 & SQL Server 2008 R2

Mainstream support end date: 1/14/2014

Extended support end date: 1/8/2019

You should definately take this into account when planning to purchase licensing. Especially if you’re not buying licenses without SA. SQL Server is a good example of a product which in my experience customers tend to buy once and then run it as long as possible. If that is your strategy then you’re most likely not getting SA and if you’re buying SQL Server 2008 R2 today to support a new application your mainstream support will end in almost 26 months. Buy if you hold out a couple of months and get SQL Server 2012 as soon as it is released you get 60 months of mainstream support.

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REPLY

Fred Eclair

2 years ago

Actually, what “R2” means is M$ fixed the bugs and added features that should have been there in the first place — sometimes left out because they company is rushing to get a product out the door.

But instead of providing these fixes and missing components as part of your initial purchase, they require you to pay for a whole new version just to gain limited additional features or obtain a version with stability in certain flaky subcomponents.

For example….we all know how much DFS replication sucked in Windows 2003. Want it fixed? Have to pony up more money to get 2003 R2 where the problems are fixed (ok, maybe not “fixed”…just more workable).

“R2” releases should be free, or very minimal “upgrade” cost. Business cases can rarely be made for the R2 releases. I predict people will start getting wise to Microsoft by waiting to implement a new server OS until after the R2 release fixes come out.

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REPLY

Umar Zeb

2 years ago

Dear Sir,

I didn’t found the exact meaning of ‘R2’ in Ur valuable article.

F u have a brief ans, then mail me on mentioned email ID.

Regards,

Umar Zeb Ashari

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REPLY

niky

1 year ago

Timothy, why don't you just answer the simple question "What does the 'R2' mean in Windows Server 2008 R2?"

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REPLY

Pank

2 months ago

"R2" is "Release 2"

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REPLY

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